



Australian Bureau of Statistics

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Summary

About this Release

This study applies the propensity score matching (PSM), as suggested in Rosenbaum and Rubin (1983), in the context of causal modelling using the ABS Business Characteristics Survey (BCS). In particular, the study uses the PSM to match the firms which received government assistance to those which did not receive government assistance. In studying the effects of government assistance, such matching is important in order to account for the systematic differences between the treated (assisted) and control (non-assisted) firms. If not accounted for, there will be uncertainty about whether the difference in the outcome of interest between the two groups is caused by the effect of the treatment (government assistance) or because of the pre-treatment differences between the two groups. One could not simply assume that the government assistance is the only factor that differentiates the outcomes of the businesses.

The study examines different matching algorithms, conducts tests to evaluate the quality of matching, and applies a selected algorithm to a specific case study – analysing the effect of government assistance on the firm's propensity to innovate. In order to address the correlation within matched pairs, a random effects model for binary matched pairs is tested using a probit generalised linear mixed model.

The Research Paper can be found on the Downloads page

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